DIVISION OF EXTENSION — UNIVERSITY OF TORONTO

will conduct a 25 session course

STRUCTURAL STABILITY WITH APPLICATIONS TO STEEL FRAMEWORKS

1967-1968

Subjects Discussed Include:

MECHANISMS

COLUMNS: Euler column, primary moment, initial curvature, bracing, stiffness approach to critical loads, critical modes, yield effects, design codes.

NON-SWAY FRAMEWORKS: Truss-type, stiffness matrix, no-sway rectangular.

Sway frameworks: Stiffness matrix, critical loads and modes, primary moments, examples of analysis, design codes, elastic-plastic effects.

PROBLEMS AND EXAMPLES will be given frequently.

The Engineer should, at the end of the course, be in a position to apply his knowledge to particular analysis, but the application will take considerable further effort on his part. The techniques rather than a complete set of working rules are presented.

IN ADDITION to particular knowledge of the stability problem, the engineer should gain considerable insight into the modern analytical technique known as the stiffness method.

AN INDICATION is given as to the use of computer facilities to handle the necessary calculation. The use of such facilities is imperative for larger problems, though no knowledge is required for this course.

25 Sessions: Tuesdays — 7:30 p.m.

COMMENCING SEPTEMBER 26, 1967

Room 243 - Galbraith Building — Fee: $65

LECTURER

PROFESSOR I. C. MEDLAND
Department of Civil Engineering
University of Toronto

Register by mail or in person. Application forms are available upon request to *Business and Professional Courses*, 84 Queen's Park, Toronto. Telephone: 928-2393 or 928-2394.

STRUCTURAL STABILITY WITH APPLICATIONS TO STEEL FRAMEWORKS

This course is designed to introduce the practising structural engineer to the basic phenomenon of instability and to the techniques of analysis of plane frameworks allowing for axial load effects. Examples and problems given are kept as practical as possible and the work throughout is related to design standards.

An introduction is made through mechanisms, individual beam-column and truss-type frameworks to multi-storey applications in moment-type frameworks. Elastic and elastic-plastic effects are considered.

Applicants should have an engineering degree or equivalent and a reasonable familiarity with undergraduate basic matrix manipulation would be helpful.

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OFFERED IN CO-OPERATION WITH
THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION